



Please note that this is the preliminary version of the conference program, last update 14 May, 2019

The name of the presenting author is underlined if there is more than one author of the presentation

Keynote oral presentations are written in bold

PLENARY LECTURES

No	DAY	TIME	TITLE	AUTHORS
PL-1	3 June	9:30	From Flame Synthesis of Carbon Black to Single Atom Catalysts by Multi-Scale Reaction Engineering	Sotiris E. Pratsinis
PL-2	3 June	15:00	Scale-down studies related to agitation intensity for the scale-up of filamentous <i>Trichoderma reesei</i> fermentations producing cellulases in stirred bioreactors	<u>Alvin W. Nienow</u> , Nicolas Hardy, Frédéric Augier, Fadhel Ben Chaabane, Catherine Béal
PL-3	4 June	9:00	Opposed jets mixers principles and technology	José Carlos B. Lopes
PL-4	4 June	14:30	Population balance equations revisited: fundamentals, challenges, applications, limitations and perspectives	<u>Jerzy Bałdyga</u> , Magdalena Jasińska, Michał Kotowicz, Grzegorz Tyl, Mounir Bouafi
PL-5	5 June	9:00	Involvement of chemical engineering in photo(bio)chemical processes	<u>Stanisław Ledakowicz</u> , Marta Gmurek

Oral presentations in TOPIC 1 Advances in Chemical Engineering Fundamentals

No	DAY	TIME	TITLE	AUTHORS
01-01	3 June	10:30	Effects of flow structure on micromixing, mass transfer and drop breakage	<u>Jerzy Bałdyga</u> , Michał Kotowicz
01-02	3 June	10:50	Solution of nonlinear PB equation using Gram-Charlier density closure	<u>Grzegorz Tyl</u> , Jerzy Bałdyga, Mounir Bouafi
01-03	3 June	11:10	Kinetics of crystallization in solid solution forming systems	<u>Maksymilian Olbrycht</u> , Maciej Balawejder, Wojciech Piątkowski, Dorota Antos
01-04	3 June	12:00	Back to the future: Distillation and absorption in the era of bio, info and process intensification	Andrzej Górak
01-05	3 June	12:20	Modeling of drop breakup in laminar flow	<u>Sylvia Maciak</u> , Magdalena Jasińska, Jerzy Bałdyga
01-06	3 June	12:40	Random packing modelling under high pressure for gas-liquid systems	Jerzy Maćkowiak
01-07	3 June	13:00	Comparison of packed column and RPB unit used for CO ₂ absorption process	<u>Justyna Wojtasik</u> , Konrad Gładyszewski, Jan Maćkowiak, Jerzy Maćkowiak, Mirko Skiborowski, Andrzej Górak, Marcin Piątkowski

Oral presentations in TOPIC 1 Advances in Chemical Engineering Fundamentals

No	DAY	TIME	TITLE	AUTHORS
01-08	4 June	10:00	Advanced CFD modelling and optimization of spray drying process	<u>Maciej Jaskulski</u> , Thi Thu Hang Tran, Evangelos Tsotsas
01-09	4 June	10:20	Residence and drying time in flame spray drying process	<u>Maria Sobulska</u> , Ireneusz Zbicinski, Marcin Piatkowski
01-10	4 June	10:40	Experimental agglomeration study in spray drying with swirling air flow	<u>Paweł Wawrzyniak</u> , Maciej Jaskulski, Marcin Piatkowski, Ireneusz Zbicinski, Dawid Zawadzki
01-11	4 June	11:30	Drop size evolution in pure liquid-liquid systems and systems containing surfactants - identification of breakage and coalescence model and flow field prediction using CFD method	<u>Wioletta Podgórska</u> , Daniel Kiziukevich
01-12	4 June	11:50	Multi-objective optimization of dividing wall columns	<u>Lena-Marie Ränger</u> , Michael Bortz, Martin von Kurnatowski, Thomas Grützner
01-13	4 June	12:10	Development and characterization of additive manufactured packing structures for thermal separation units	<u>Johannes Neukäuffer</u> , Florian Hanusch, Sebastian Rehfeldt, Harald Klein, Thomas Grützner
01-14	4 June	12:30	Considerations on the design of a pilot-plant-scale simplified multiple dividing wall column	<u>Ulrich Preissinger</u> , Lena-Marie Raenger, Thomas Grützner
01-15	5 June	10:00	Temperature and pressure effects importance in chromatographic columns working in the UPLC and the SFC conditions	<u>Marcin Chutkowski</u> , Krzysztof Kaczmarek
01-16	5 June	10:20	The application of diamond column in isocratic and gradient Ultra High Pressure Liquid Chromatography	Marek Leško, Jörgen Samuelsson, Torgny Fornstedt, <u>Krzysztof Kaczmarek</u>
01-17	5 June	10:40	Simultaneous adsorption of 4-nitrophenol, 4-methylphenol and 4-chlorophenol from a water solution on spherical activated carbon	<u>Władysław Kamiński</u> , Andrzej Świątkowski, Krzysztof Kusmierek
01-18	5 June	11:30	Composition analysis of multi-ingredient frozen food products in the production line	<u>Jan Krzysztoforski</u> , Mieszko Boczkowski, Piotr Cendrowski, Janusz Załuski, Radosław Płotkowiak, Marek Henczka
01-19	5 June	11:50	Zinc oxide-polymer composite filter for effective abiotic particles separation from air	<u>Anna Jackiewicz-Zagórska</u> , Łukasz Werner, Bartosz Nowak, Marta Bojarska
01-20	5 June	12:10	CFD modeling of droplet generation process using the electrostatic impulse method	<u>Piotr Cendrowski</u> , Katarzyna Kramek-Romanowska, Dorota Lewińska, Paulina Korycka, Marcin Grzeczkwicz, Jan Krzysztoforski

Oral presentations in TOPIC 2 Chemical reaction engineering – Novel Experimental Approach, Modelling and Optimization

No	DAY	TIME	TITLE	AUTHORS
02-01	3 June	10:30	Experimental studies of molybdenum disulphide precipitation in turbulent micromixers	<u>Michał Wojtalik</u> , Wojciech Orciuch, Łukasz Makowski
02-02	3 June	10:50	Nanostructured monolithic microreactors for ultra fast synthesis of fine chemicals	Katarzyna Szymańska
02-03	3 June	11:10	Effect of surfactant adsorption on rheology of dense emulsions	<u>Mateusz Mańkowski</u> , Magdalena Jasińska, Jerzy Bałdyga
02-04	3 June	12:00	Biological and chemical activators for enhanced carbon dioxide absorption in packed columns	Jan Maćkowiak
02-05	3 June	12:20	Comparison of single and double-section reactive distillation columns based on temperature inferential control	Zhenyu Yan
02-06	3 June	12:40	Mixing in curved tube geometries – comparison of a helical tube mixer with a twisted bend mixer	Antoni Rozeń, <u>Janusz Kopytowski</u>
02-07	3 June	13:00	NO _x and N ₂ O abatement for nitric acid plant: Fe-FER catalyst as the best industrial solution	<u>Alberto Garbujo</u> , Roberto Lanza, Emmanuel Rohart, Arnaud Lahougue, Grégoire Gaudry, Raffaele Ostuni, Pierdomenico Biasi
02-08	4 June	10:00	Characterization of additive manufactured materials for thermal separation technology	<u>Bernhard Seyfang</u> , Johannes Neukäuffer, Thomas Grütznier
02-09	4 June	10:20	Rate of change of gas concentration in presence of gas nanobubbles and stability of nanodispersion	<u>Karol Ulatowski</u> , Agata Piotrowska, Andrzej Mróz, Paweł Sobieszuk
02-10	4 June	10:40	On Lagergren equation	Narcyz Mirosław Grzesik
02-11	4 June	11:30	Artificial neural networks - a review: applications in chemical engineering and new perspectives for practical implementation of the third paradigm	<u>Eugeniusz Molga</u>, Robert Cherbański, Michał Lewak
02-12	4 June	11:50	Fast numerical method for analysis of dead zone appearance for heterogeneous catalysis	<u>Mirosław Szukiewicz</u> , Krzysztof Kaczmarek, Elżbieta Chmiel-Szukiewicz, Adrian Szafek
02-13	4 June	12:10	Assessment of the performance of a non-isothermal multifunctional catalyst pellet	<u>Katarzyna Bizon</u> , Krzysztof Skrzypek-Markiewicz

Oral presentations in TOPIC 3 Product Design and Novel materials application

No	DAY	TIME	TITLE	AUTHORS
03-01	3 June	10:30	Thermo-hydrodynamic analysis of the processing of stirred microgels	<u>Zdzisław Jaworski</u> , Anna Story, Grzegorz Story
03-02	3 June	10:50	Modification of depth filters structures for effective removal of bacteria from water	<u>Leon Gradoń</u> , Ewa Stanisławek, Ewa Sztuk-Sikorska, Szymon Jakubiak
03-03	3 June	11:10	The use of additives in spray drying of dextran-based nanosuspensions designed for inhalation treatment	<u>Katarzyna Jabłczyńska</u> , Tomasz R. Sosnowski
03-04	5 June	10:00	Application of supercritical fluids to the development of materials with antibacterial properties	<u>Irena Zizovic</u> , Anna Trusek
03-05	5 June	10:20	Dynamics of aerosol generation and release - DPI performance considerations	Marta Żaczek, <u>Agata Dorosz</u> , Arkadiusz Moskal
03-06	5 June	10:40	Thin-film catalytic structured packings for CO ₂ conversion	<u>Hanna Kierzkowska-Pawlak</u> , Jacek Tyczkowski, Jacek Balcerzak, Ewelina Kruszczyk
03-07	5 June	11:30	Fibrous filters modified with aerogel structure for improvement of oil mist separation	<u>Bartosz Nowak</u> , Jakub Gac, Marta Bojarska
03-08	5 June	11:50	Modelling dynamics of poly(acrylic acid) chains grafted to a surface of polypropylene membrane	<u>Nina Borzęcka</u> , Jakub Gac

Oral presentations in TOPIC 4 Bioengineering and Biotechnology

No	DAY	TIME	TITLE	AUTHORS
04-01	4 June	10:00	Enzymatic hydrolysis of hyaluronic layer	Anna Trusek
04-02	4 June	10:20	Impact of morphology-influencing factors on the lecithin-based hydroxyapatite precipitation process	Joanna Latocha, <u>Michał Wojasiński</u> , Katarzyna Dąbkowska, Paweł Sobieszuk, Tomasz Ciach
04-03	4 June	10:40	Modeling of heavy metals influence on activated sludge	<u>Konrad Matyja</u> , Anna Trusek
04-04	4 June	11:30	Modification of chitin with ionic liquids	<u>Małgorzata Jaworska</u> , Andrzej Górak

Oral presentations in TOPIC 4 Bioengineering and Biotechnology

No	DAY	TIME	TITLE	AUTHORS
04-05	4 June	11:50	Enhanced yield of adherent cells growth on Cytodex 3 microcarriers in disposable WAVE bioreactor system	<u>Kamil Wierzchowski</u> , Aleksandra Kuźmińska, Maciej Pilarek
04-06	4 June	12:10	Prepurification of monoclonal antibodies by aqueous two-phase extraction and centrifugal partition chromatography	<u>Wojciech Marek</u> , Wojciech Piątkowski, Dorota Antos
04-07	4 June	12:30	Polydopamine-based surface modification as a universal method for the functionalization of various materials	<u>Kamil Kopec</u> , Aleksandra Kuźmińska, Tomasz Ciach

Oral presentations in TOPIC 5 Environmental & Sustainable Chemical Engineering

No	DAY	TIME	TITLE	AUTHORS
05-01	3 June	12:00	Life cycle assessment of bioethanol production - A review	<u>Tahereh Soleymani Angili</u> , Anne Rödl, Martin Kaltschmitt, Ireneusz Zbiciński
05-02	3 June	12:20	Hydrogen generation from ethanol in dielectric barrier discharge	<u>Bogdan Ulejczyk</u> , Michał Młotek, Krzysztof Krawczyk, Łukasz Nogal
05-03	3 June	12:40	Regeneration of granular activated carbon loaded with acetone using microwave and conductive heating	Robert Cherbański
05-04	3 June	13:00	Selective adsorption of oil from oil-water mixture on the instability driven interfacial surface patterns over thin soft PDMS film	<u>Surita Basu</u> , Jayati Sarkar
05-05	5 June	10:00	Concept of heat recovery with chemical heat pump	Michał Tylman, Maciej Jaskulski, Paweł Wawrzyniak, Marzena Czapnik, Dawid Zawadzki, Tomasz Olejnik
05-06	5 June	10:20	CO ₂ recovery from flue gases-LCA analysis	<u>Aleksandra Ziemińska-Stolarska</u> , Ireneusz Zbiciński, Konrad Gładyszewski, Andrzej Górak
05-07	5 June	10:40	Numerical model of the oil mist filtration by means of the filter modified with silica-based aerogels	<u>Jakub Gac</u> , Bartosz Nowak, Marta Bojarska
05-08	5 June	11:30	The efficiency of a portable air cleaner in the reduction of local PM2.5 concentration in the indoor environment	Adrian Okołowicz, <u>Tomasz R. Sosnowski</u>
05-09	5 June	11:50	Speciation of zinc and lead in the dust of a blast furnace	Christof Lanzerstorfer
05-10	5 June	12:10	Design method for the synthesis of cost-optimal, flexible water networks with zero wastewater disposal	Grzegorz Poplewski

POSTER PRESENTATIONS in TOPIC 1 Advances in Chemical Engineering Fundamentals

No	DAY	TIME	TITLE	AUTHORS
P1-01	3 June	16:00	The effect of the solids addition on the stability of o/w emulsions	<u>Mariola Błaszczuk</u> , Jerzy Sęk, Łukasz Przybysz
P1-02	3 June	16:00	Correlation of Sauter mean drop diameter and Sherwood number for packed lactic acid extraction column	<u>Kanungnit Chawong</u> , Wittaya Julklang, Boonpradab Daengpradab, Santisuk Hasin, Sunisa Sunisa Singhawannurat, Panarat Rattanaphanee
P1-03	3 June	16:00	Electrochemical properties of niobium doped bismuth ferrite	<u>Małgorzata Dziubaniuk</u> , Jan Wyrwa, Mieczysław Rękas
P1-04	3 June	16:00	Electrochemical properties of $\text{Bi}_7\text{Fe}_3\text{Ti}_3\text{O}_{21}$ substituted by rare earth metals	<u>Małgorzata Dziubaniuk</u> , Joanna Polnar
P1-05	3 June	16:00	Modeling and experimental validation for reactive dividing wall columns: comparison of equilibrium stage and rate-based model	<u>Georg Fieg</u> , Torben Egger
P1-06	3 June	16:00	Heat exchanger network design considering flexible cost functions and dynamic aspects	<u>Georg Fieg</u> , Matthias Rathjens
P1-07	3 June	16:00	Modeling of solid particles transport in non-newtonian fluid – CFD investigation	<u>Agnieszka Fus</u> , Arkadiusz Moskal
P1-08	3 June	16:00	Influence of amplitude and frequencies of pulsation on gas hold-up and mass transfer in the pulsed bubble columns	<u>Adam Gwiazda</u> , Marek Dziubiński, Paweł Budzyński
P1-09	3 June	16:00	Filtration of aerosol particles on multilayer fibrous filters – physical base and optimization	<u>Mateusz Kamiński</u> , Jakub M. Gac
P1-10	3 June	16:00	Heat transfer in an agitated vessel with a vertical tubular coil for non-Newtonian liquid	Marta Major-Godlewska, <u>Joanna Karcz</u>
P1-11	3 June	16:00	A mixing tank as a pasteurizer of an ice cream mixture	<u>Czesław Kuncewicz</u> , Piotr Przybysz, Jacek Dańczak, Jacek Stelmach
P1-12	3 June	16:00	Surface morphology and particle size distribution as affected by high-energy mixing of powders	<u>Karolina Leś</u> , Marcin Chutkowski, Sylwia Kozdra, Mateusz Przywara, Ireneusz Opaliński
P1-13	3 June	16:00	Prediction of random packing efficiency under high pressure for distillation and absorption systems	Jerzy Maćkowiak
P1-14	3 June	16:00	Simulation of underground thermal energy storage systems equipped with ground heat exchanger	<u>Piotr Owczarz</u> , Patryk Ziółkowski, Marek Dziubiński
P1-15	3 June	16:00	CFD simulation of dead-end filtration	Stela Panyovska
P1-16	3 June	16:00	Evaluation of the methods for determination of the Peclet number in a hybrid fluidized-bed airlift apparatus	<u>Mateusz Prończuk</u> , Katarzyna Bizon
P1-17	3 June	16:00	A novel powder-rheometer technique for rheology and flow properties investigation and modeling	<u>Mateusz Przywara</u> , Karolina Leś, Sylwia Kozdra, Marcin Chutkowski, Ireneusz Opaliński

POSTER PRESENTATIONS in TOPIC 1 Advances in Chemical Engineering Fundamentals

No	DAY	TIME	TITLE	AUTHORS
P1-18	3 June	16:00	Granulation and drying of fertilizers based on alternative source of phosphorus	<u>Mateusz Przywara</u> , Maksymilian Olbrycht, Michał Kołodziej, Roman Bochenek, Wojciech Marek, Maciej Balawejder, Wojciech Piątkowski, Dorota Antos
P1-19	3 June	16:00	Investigation of mass transfer in a microfluidic device simulating gas transport in human lung	Wojciech Frąckowiak, Agata Stefanek, <u>Paweł Sobieszuk</u>
P1-20	3 June	16:00	The power consumption an eccentrically placed impeller with coiled rotary paddles	<u>Jacek Stelmach</u> , Czesław Kuncewicz, Frantisek Rieger
P1-21	3 June	16:00	Risk analysis in forecasting the low pressure gas pipelines network load	<u>Jolanta Szoplik</u> , Paulina Stelmasińska
P1-22	3 June	16:00	Analysis of gas network storage capacity for alternative fuels	<u>Jolanta Szoplik</u> , Paulina Stelmasińska
P1-23	3 June	16:00	Development of polymer melt-blown filters covered with aerogel for filtration applications	<u>Łukasz Werner</u> , Anna Jackiewicz-Zagórska, Bartosz Nowak, Marta Bojarska
P1-24	3 June	16:00	Studies on adsorptive properties of selected analytes in Purospher Star NH ₂ column	<u>Piotr Ziobrowski</u> , Marcin Chutkowski, Wojciech Zapała
P1-25	3 June	16:00	Retention behavior of selected analytes in Purospher Star NH ₂ column	<u>Piotr Ziobrowski</u> , Marcin Chutkowski, Wojciech Zapała

POSTER PRESENTATIONS in TOPIC 2 Chemical reaction engineering – Novel Experimental Approach, Modelling and Optimization

No	DAY	TIME	TITLE	AUTHORS
P2-01	3 June	16:00	Effect of extra-column volumes on the efficiency of protein chromatography	<u>Krzysztof Baran</u> , Wojciech Marek, Wojciech Piątkowski, Dorota Antos
P2-02	3 June	16:00	Dynamics of a non-isothermal catalyst pellet with simultaneous adsorption and chemical reaction under alternate concentration and temperature fields	<u>Katarzyna Bizon</u> , Bolesław Tabiś
P2-03	3 June	16:00	CFD modelling of hydrogen-air deflagrations	<u>Robert Cherbański</u> , Eugeniusz Molga
P2-04	3 June	16:00	Application of a low-voltage electric field and a ruthenium-based catalyst for phase transfer hydrogenation of 1-phenylethanone	Kamil Kamiński
P2-05	3 June	16:00	The influence of chosen parameters on the rate of oxygen dissolution and volumetric mass transfer coefficient in a mechanically agitated yeast suspension	<u>Anna Kiełbus-Rapała</u> , Anna Stasik

POSTER PRESENTATIONS in TOPIC 2 Chemical reaction engineering – Novel Experimental Approach, Modelling and Optimization

No	DAY	TIME	TITLE	AUTHORS
P2-06	3 June	16:00	Influence of rotating magnetic field on hydrodynamics in magnetically assisted external-loop airlift reactor	<u>Marian Kordas</u> , Joanna Lechowska, Rafał Rakoczy
P2-07	3 June	16:00	The influence of boundary conditions on results of CFD modelling of pollutants dispersion in atmospheric air	<u>Michał Lewak</u> , Eugeniusz Molga
P2-08	3 June	16:00	Wet-process phosphoric acid leaching process intensified by pulsed electric field	<u>Zuohua Liu</u> , Yi Yang, Deyin Gu, Liang Wang, Xia Xiong, Yundong Wang
P2-09	3 June	16:00	Numerical simulation of hydrogen-air detonation	<u>Piotr Machniewski</u> , Eugeniusz Molga
P2-10	3 June	16:00	Test reactions to study micromixing	<u>Mateusz Mańkowski</u> , Magdalena Jasińska
P2-11	3 June	16:00	Gliding discharge reactor for stable chemical substances decomposition	<u>Michał Młotek</u> , Bogdan Ulejczyk, Paweł Józwiak, Maciej Biały, Krzysztof Krawczyk
P2-12	3 June	16:00	CFD methods to support modelling of the oxidative desulfurization of pyrolytic oils	<u>Eugeniusz Molga</u> , Michał Lewak
P2-13	3 June	16:00	Optimal residence time in a reactor with axial dispersion for subsequent reactions	Artur Poświata
P2-14	3 June	16:00	The kinetics of CaF ₂ precipitation carried out in the selected static mixers	<u>Magdalena Stec</u> , Piotr Synowiec
P2-15	3 June	16:00	The thin film fixed bed photocatalytic reactor operated under visible light	<u>Jakub Szyman</u> , Robert Grzywacz
P2-16	3 June	16:00	Ammonia synthesis on cobalt catalyst - the effect of selected promoters on the catalyst properties and activity	<u>Aleksandra Tarka</u> , Paulina Niewińska, Martyna Żatkiewicz, Magdalena Zybert, Wojciech Patkowski, Hubert Ronduda, Wioletta Raróg-Pilecka
P2-17	3 June	16:00	Prediction of the permeabilization process based on the Response Surface Methodology	Ilona Trawczyńska

POSTER PRESENTATIONS in TOPIC 3 Product Design and Novel materials application

No	DAY	TIME	TITLE	AUTHORS
P3-01	3 June	16:00	Effect of the GO additive on properties polymeric CA membranes	<u>Martyna Blus</u> , Elwira Tomczak
P3-02	3 June	16:00	Graphene oxide-based materials as supports for photocatalyst nanoparticles	<u>Zuzanna Bojarska</u> , Marta Mazurkiewicz-Pawlicka, Łukasz Makowski
P3-03	3 June	16:00	On the effects of blending on the performance of model carrier-based DPI powder for in vitro studies	<u>Agata Dorosz</u> , Arkadiusz Moskal
P3-04	3 June	16:00	Foam spray drying microencapsulation	Artur Lewandowski, <u>Maciej Jaskulski</u> , Ireneusz Zbiciński
P3-05	3 June	16:00	Application of chitin in chromatography. Preliminary investigation	Olga Sokolnicka, <u>Malgorzata Jaworska</u> , Andrzej Górak, Karol Ulatowski
P3-06	3 June	16:00	Poly lactide-ceramic composite porous granulates for controlled protein release	<u>Piotr Kowalczyk</u> , Paulina Trzaskowska, Tomasz Ciach
P3-07	3 June	16:00	Mechanochemical technique of modifying conductive properties of polymer composites	<u>Sylvia Kozdra</u> , Ireneusz Opaliński, Karolina Leś, Mateusz Przywara
P3-08	3 June	16:00	Effect of plasma treatment on properties of polymer filter media	<u>Andrzej Krasiński</u> , Artur Małolepszy, Michał Stor
P3-09	3 June	16:00	Preparation of hydrophobic cellulose based surfaces by simultaneous plasma treatment and silane deposition	<u>Andrzej Krasiński</u> , Kamila De Witte, Patrycja Jachimczyk, Artur Małolepszy
P3-10	3 June	16:00	Recovery of metals from industrial wastewaters in the form of micro- and nanoparticles	<u>Sylvia Luchcińska</u> , Jakub Lach, Kamil Wróbel, Aneta Łukomska
P3-11	3 June	16:00	MoS ₂ suspensions in synthetic oil – rheological and tribology measurements	<u>Łukasz Makowski</u> , Antoni Rozeń, Wojciech Orciuch
P3-12	3 June	16:00	Antimicrobial properties of graphene oxide decorated with Ag and Au nanoparticles	Julia Bien, Sławomir Jaworski, Leszek Stobinski, <u>Artur Malolepszy</u>
P3-13	3 June	16:00	Cytotoxicity studies of various forms of graphene flakes	Anna Dmowska, Rafał Podgórski, Tomasz Ciach, Leszek Stobinski, <u>Artur Malolepszy</u>
P3-14	3 June	16:00	Experimental investigation of heat and mass transfer processes during EC-aerosols generation and penetration through the human respiratory tract	<u>Marcin Odziomek</u> , Katarzyna Dobrowolska
P3-15	3 June	16:00	The effect of the precursor calcination method on structure and activity of the Ba/Co ₃ O ₄ -CeO ₂ catalysts for ammonia synthesis	<u>Wojciech Patkowski</u> , Paweł Kowalik, Katarzyna Antoniak-Jurak, Wiesław Próchniak, Paweł Wiercioch, Aleksandra Tarka, Magdalena Zybert, Hubert Ronduda, Wioletta Raróg-Pilecka, Alicja Skiba, Bogusław Mierzwa

POSTER PRESENTATIONS in TOPIC 3 Product Design and Novel materials application

No	DAY	TIME	TITLE	AUTHORS
P3-16	3 June	16:00	Properties of graphene oxide obtained with two different approaches: "top-down" and "bottom-up"	Aleksandra Poniatowska, Maciej Trzaskowski, Tomasz Ciach
P3-17	3 June	16:00	Functional graphene oxide coatings on metallic surfaces	Aleksandra Poniatowska, Maciej Trzaskowski, Tomasz Ciach
P3-18	3 June	16:00	Cobalt catalyst doped with Ba and Ce designed for high efficiency ammonia synthesis process	Wioletta Raróg-Pilecka, Magdalena Zybert, Aleksandra Tarka, Wojciech Patkowski, Hubert Ronduda
P3-19	3 June	16:00	Effect of lithium salts on structure, morphology and electrochemical properties of LiNi _{0.6} Mn _{0.2} Co _{0.2} O ₂ cathode material in lithium ion batteries	Hubert Ronduda, Magdalena Zybert, Anna Szczęśna, Tomasz Trzeciak, Wioletta Raróg-Pilecka, Elżbieta Żero, Andrzej Ostrowski
P3-20	3 June	16:00	Resin enhancement in prepreg carbon systems for rowing racing shells	Rayehe Samimi
P3-21	3 June	16:00	PIV flow characteristics of microgels in process equipment	Anna Story, Grzegorz Story, Zdzisław Jaworski
P3-22	3 June	16:00	Effect of the concentration and pH of Carbopol Ultrez 30 microgels on their flow curves	Grzegorz Story, Anna Story, Zdzisław Jaworski
P3-23	3 June	16:00	Production of 3D printed polylactide scaffolds with surface grafted hydrogel coatings	Piotr Kowalczyk, Paulina Trzaskowska, Ilona Łojarczyk, Rafał Podgórski, Tomasz Ciach
P3-24	3 June	16:00	Suspension grinding in stirred media mills and high-shear impeller – experimental and CFD simulation	Norbert Wiatr, Radosław Krzosa, Radosław Adamek, Wojciech Orciuch, Łukasz Makowski
P3-25	3 June	16:00	Spinnability window of polymer solutions in solution blow spinning	Michał Wojasiński, Tomasz Ciach
P3-26	3 June	16:00	Influence of solution blow spinning processing parameters on mean fiber diameter of synthetic polymeric submicron fibers	Michał Wojasiński, Tomasz Ciach
P3-27	3 June	16:00	Light scattering and rheology as a tools to investigate chitosan colloidal systems	Patryk Ziółkowski, Piotr Owczarz, Marek Dziubiński
P3-28	3 June	16:00	Influence of heat treatment procedure on the performance of LiNi _{0.6} Mn _{0.2} Co _{0.2} O ₂ cathode material in lithium-ion batteries	Magdalena Zybert, Hubert Ronduda, Anna Szczęśna, Tomasz Trzeciak, Wioletta Raróg-Pilecka, Elżbieta Żero, Andrzej Ostrowski

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No	DAY	TIME	TITLE	AUTHORS
P4-01	4 June	16:30	Investigations of substance release in systems simulating transport from drug eluting stents	<u>Anna Adach</u> , Martyna Weber, Rafał Pater
P4-02	4 June	16:30	Degradation of the bacterial cellulose carrier by activated sludge microorganisms	<u>Anna Banach - Wiśniewska</u> , Anna Żywicka, Aleksandra Ziemińska - Buczyńska
P4-03	4 June	16:30	Pseudomonas cepacia lipase immobilization for hydrolytic reactions and the kinetic resolution of the non-equimolar mixtures of isomeric alcohols	Zofia Hrydziuszko, Daniel Strub, Karolina Labus, <u>Jolanta Bryjak</u>
P4-04	4 June	16:30	Continuous resolution of diastereoisomeric alcohol using monolithic microreactor	Daniel Strub, Katarzyna Szymańska, Zofia Hrydziuszko, <u>Jolanta Bryjak</u> , Andrzej Jarzębski
P4-05	4 June	16:30	Rheological analysis of air-liquid interface for the quantitative assessment of lung surfactant dynamics	<u>Katarzyna Dobrowolska</u> , Katarzyna Jabłczyńska, Tomasz R. Sosnowski
P4-06	4 June	16:30	Dynamic properties of air/liquid surface with the lung surfactant model and selected nebulization drugs	<u>Katarzyna Dobrowolska</u> , Tomasz R. Sosnowski
P4-07	4 June	16:30	Analysis of the effect of rotating magnetic field on bacteriophage activity	<u>Bartłomiej Grygorcewicz</u> , Maciej Konopacki, Barbara Dołęgowska, Rafał Rakoczy
P4-08	4 June	16:30	Oscillatory behaviour of Saccharomyces cerevisiae in a continuous stirred tank bioreactor	Adrian Ciesielski, <u>Robert Grzywacz</u>
P4-09	4 June	16:30	The analysis of rotating magnetic field as triggers of dynamic cellular response of L929 cells	<u>Magdalena Jędrzejczak-Silicka</u> , Rafał Rakoczy
P4-10	4 June	16:30	Biocompatibility of boron nitride functionalized with hydroxyl groups and gold nanoparticles	<u>Magdalena Jędrzejczak-Silicka</u> , Martyna Trukawka, Ewa Mijowska
P4-11	4 June	16:30	Bulk protein crystallization by forced convection evaporation	<u>Michał Kołodziej</u> , Maksymilian Olbrycht, Izabela Poplewska, Wojciech Piątkowski, Dorota Antos
P4-12	4 June	16:30	Application of small-angle x-ray scattering for the design of bulk protein crystallization	Izabela Poplewska, Andrzej Łyskowski, <u>Michał Kołodziej</u> , Piotr Szałański, Wojciech Piątkowski, Dorota Antos
P4-13	4 June	16:30	Magnetically assisted bacterial cellulose production process	<u>Maciej Konopacki</u> , Rafał Rakoczy
P4-14	4 June	16:30	Application of nonporogenes in the process of production of porous structures by supercritical foaming	<u>Katarzyna Kosowska</u> , Marek Henczka
P4-15	4 June	16:30	Properties of the cylindrical polyurethane structures	<u>Aleksandra Kuźmińska</u> , Beata Butruk-Raszeja, Tomasz Ciach
P4-16	4 June	16:30	Hydrogel coatings for medical applications	<u>Aleksandra Kuźmińska</u> , Aleksandra Stefanowska, Beata Butruk-Raszeja, Tomasz Ciach

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No	DAY	TIME	TITLE	AUTHORS
P4-17	4 June	16:30	Entrapment of invertase in different hydrogel matrices	<u>Karolina Labus</u> , Kamila Wolanin, Łukasz Radośniński
P4-18	4 June	16:30	Hydroxyapatite nanoparticles precipitation in continuous Y-shaped millireactors	<u>Joanna Latocha</u> , Michał Wojasiński, Klaudia Jurczak, Stanisław Gierlotka, Paweł Sobieszuk, Tomasz Ciach
P4-19	4 June	16:30	Microparticles with contrast agent for the embolization	<u>Ilona Łojarczyk</u> , Tomasz Ciach
P4-20	4 June	16:30	Polymer microparticles with a medical application	<u>Ilona Łojarczyk</u> , Tomasz Ciach
P4-21	4 June	16:30	Mathematical tool for design and scaling up protein chromatography	<u>Wojciech Marek</u> , Wojciech Piątkowski, Dorota Antos
P4-22	4 June	16:30	Emulsion platforms for controlling an active agent release process	<u>Agata Metera</u> , Agnieszka Markowska-Radomska, Ewa Dłuska
P4-23	4 June	16:30	The influence of Diesel Exhaust Particles on rheological properties of human blood and plasma	Urszula Michalczuk
P4-24	4 June	16:30	Immobilization of trypsin on modified magnetic nanoparticles	Justyna Miłek
P4-25	4 June	16:30	The influence of exogenous particles on saliva	<u>Arkadiusz Moskał</u> , Agata Penconek, Urszula Michalczuk
P4-26	4 June	16:30	Adsorption behavior of unstable proteins in hydrophobic interaction chromatography	<u>Renata Muca</u> , Dorota Antos, Wojciech Piątkowski
P4-27	4 June	16:30	Waste biomass hydrolysates as a substrate for butyric acid and butanol production	<u>Greta Naydenova</u> , Dragomir Yankov
P4-28	4 June	16:30	The influence of desert dust on mucus	<u>Agata Penconek</u> , Urszula Michalczuk, Arkadiusz Moskał
P4-29	4 June	16:30	Optimization of bioactive compounds extraction from onion skin <i>Allium cepa</i> L.	<u>Tomasz Piechowiak</u> , Maciej Baławejder
P4-30	4 June	16:30	Determination of mixing time in a disposable culture bag subjected to wave-type agitation in WAVE bioreactor	<u>Maciej Pilarek</u> , Kamil Wierzychowski, Aleksandra Adamczyk
P4-31	4 June	16:30	Influence of aqueous phase viscosity on the oxygen absorption rate during wave-type agitation performed in a disposable culture bag	<u>Maciej Pilarek</u> , Kamil Wierzychowski, Paweł Sobieszuk, Katarzyna Dąbkowska
P4-32	4 June	16:30	Production and properties of polymer-ceramic filaments for 3D printing of bone implants	<u>Rafał Podgórski</u> , Joanna Latocha, Michał Wojasiński, Tomasz Ciach

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No	DAY	TIME	TITLE	AUTHORS
P4-33	4 June	16:30	Lattice-Boltzmann modelling of blood clotting process	Rafał Przekop, Jakub Mazurczak
P4-34	4 June	16:30	The effect of rotating magnetic field on wound healing: in vitro studies	Rafał Rakoczy, Magdalena Jędrzejczak-Silicka, Marian Kordas
P4-35	4 June	16:30	Shear effects of chitosan colloidal solutions in biomedical applications	Anna Rył, Piotr Owczarz, Marek Dziubiński
P4-36	4 June	16:30	Hybrid chitosan scaffolds for bone tissue engineering applications	Anna Rył, Piotr Owczarz
P4-37	4 June	16:30	The influence of the aerator size on steady-state performance of a two-phase fluidized-bed bioreactor with external aeration	Szymon Skoneczny, Bolesław Tabiś
P4-38	4 June	16:30	Thermogravimetric analysis of bioconversion of lignocellulosic biomass during mushroom compost production	Radosław Ślęzak, Liliana Krzystek, Stanisław Ledakowicz
P4-39	4 June	16:30	Sterilisation of nanobubble dispersions	Karol Ulatowski, Julia Fiuk, Paweł Sobieszuk, Małgorzata Jaworska
P4-40	4 June	16:30	Bioprocessing of non-adherent HL-60 cells in single-use WAVE bioreactor system: mathematical modelling of cell growth	Kamil Wierzchowski, Maciej Pilarek

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No	DAY	TIME	TITLE	AUTHORS
P5-01	4 June	16:30	Nitrogen removal bacteria community dynamics in a sequencing batch bioreactor during wastewater treatment start-up	Aleksandra Ziemińska - Buczyńska, Anna Banach - Wiśniewska, Mariusz Tomaszewski, Grzegorz Cema
P5-02	4 June	16:30	Start-up of the one-stage nitrification/anammox, process stability and recovery	Grzegorz Cema, Aleksandra Ziemińska-Buczyńska, Sławomir Ciesielski, Joanna Surmacz-Górska
P5-03	4 June	16:30	Improvement of corn straw, corncobs, and poplar wood conversion into monosaccharides: an influence of KOH pretreatment time	Katarzyna Dąbkowska, Joanna Latocha, Maciej Pilarek
P5-04	4 June	16:30	Impact of transmembrane pressure on the enzymatic saccharification of corn straw biomass performed in membrane reactor	Katarzyna Dąbkowska, Maciej Pilarek, Andrzej Kołtuniewicz
P5-05	4 June	16:30	Discharge of sludge from water treatment plant to the municipal sewage	Anna Dominiak, Elwira Tomczak
P5-06	4 June	16:30	Removal and transformation of benzotriazole in various wastewater treatment technologies	Ewa Felis, Adam Sochacki, Joanna Kalka, Katarzyna Kowalska, Sylwia Bajkacz

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No	DAY	TIME	TITLE	AUTHORS
P5-07	4 June	16:30	Experimental evaluation of permeability of porous solid materials under the regard of directionality of gas flow	Grzegorz Wałowski, <u>Gabriel Filipczak</u>
P5-08	4 June	16:30	Parametric sensitivity of the model of a biotrickling filter (BTF) for removal of volatile organic compounds (VOCs) from airstream	Agnieszka Gąszczak, Adam Rotkegel, <u>Daniel Janecki</u> , Grażyna Bartelmus
P5-09	4 June	16:30	Application of real-time FT-IR technique to study the kinetics of fast photopolymerization reactions induced by monochromatic visible light	<u>Alicja Gruchała</u> , Emilia Hola, Joanna Ortyl
P5-10	4 June	16:30	Modeling of bioaerosol concentration level in the ventilation ducts system	Piotr Grzybowski
P5-11	4 June	16:30	Ecotoxicity of 5-methyl-1H-benzotriazole photolytic degradation intermediates	<u>Joanna Kalka</u> , Ewa Felis
P5-12	4 June	16:30	Physical activation of tyre pyrolysis char and adsorption equilibrium for n-hexane	<u>Tomasz Kotkowski</u> , Robert Cherbański, Eugeniusz Molga
P5-13	4 June	16:30	Energy efficiency of biogas production from maize hybrids	<u>Liliana Krzystek</u> , Karol Wajszczuk, Anna Pazera, Adam Sitarski, Radosław Ślęzak, Stanisław Ledakowicz
P5-14	4 June	16:30	Condensation systems in the plastics waste pyrolysis plant	<u>Roman Krzywda</u> , Bogumiła Wrzesińska, Arkadiusz Politowski
P5-15	4 June	16:30	Diffusion of zinc on alginate beads	Sylvia Kwiatkowska-Marks
P5-16	4 June	16:30	The use of two-stage membrane filtration for water recovery in textile industry	<u>Joanna Marszałek</u> , Renata Żyła
P5-17	4 June	16:30	Chemical demulsification of emulsions based on cutting oil	<u>Piotr Pacholski</u> , Jerzy Sęk
P5-18	4 June	16:30	Reinforcement of geopolymers based on metakaolin by addition of carbon nanotubes dispersion	<u>Piotr Pacholski</u> , Jerzy Sęk, Paulo Borges
P5-19	4 June	16:30	Crude oil scheduling under multiple uncertainties using an evolutionary algorithm	<u>Debashish Panda</u> , Manojkumar Ramteke
P5-20	4 June	16:30	Thermal regeneration of the vertical ground heat exchangers in Polish conditions	<u>Sebastian Pater</u> , Janusz Magiera, Włodzimierz Ciesielczyk

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No	DAY	TIME	TITLE	AUTHORS
P5-21	4 June	16:30	Kinetic and calorimetric studies of photopolymerization reaction of TMPTA acrylic monomer using new molecular luminescent sensors	<u>Maciej Pilch</u> , Joanna Ortyl, Roman Popielarz
P5-22	4 June	16:30	The influence of solvent and evaporation temperature on membrane properties	<u>Daniel Polak</u> , Maciej Szwast
P5-23	4 June	16:30	The analysis of laundry wastewater treatment using ceramic membranes	<u>Daniel Polak</u> , Mateusz Rosiński, Maciej Szwast
P5-24	4 June	16:30	CFD simulation of n-hexane pool fire	<u>Leszek Rudniak</u> , Eugeniusz Molga
P5-25	4 June	16:30	Liquid distribution in random high performance packings	Konstantina Stefanova
P5-26	4 June	16:30	Fluorescence Probe Technology (FPT) for measuring on-line and in-situ of free-radical and cationic photopolymerization processes	<u>Patryk Szymaszek</u> , Magdalena Jankowska, Joanna Ortyl
P5-27	4 June	16:30	Statistical evaluation of the nanoscale zero-valent iron (nZVI) influence on the activity of the anammox biomass	<u>Mariusz Tomaszewski</u> , Grzegorz Cema, Aleksandra Ziemińska-Buczyńska
P5-28	4 June	16:30	Nanoscale zero-valent iron (nZVI) influence on the respiratory activity of the nitrifying bacteria	<u>Mariusz Tomaszewski</u> , Grzegorz Cema, Filip Gamoń, Aleksandra Ziemińska-Buczyńska
P5-29	4 June	16:30	Membrane processes in coke oven wastewater treatment	<u>Maciej Wajsprych</u> , Anna Trusek, Andrzej Noworyta
P5-30	4 June	16:30	Effect of waste types on properties of pyrolytic oil	<u>Bogumiła Wrzeńska</u> , Roman Krzywda
P5-31	4 June	16:30	Purification of water solution from humic acids and NOM using ceramic membrane	<u>Aleksandra Zielińska</u> , Elwira Tomczak

